

# **Can Patients on Chronic Anticoagulation Receive Non-Steroidal Anti-inflammatory Therapy Safely Following Primary Total Knee Arthroplasty?**

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## **INTRODUCTION:**

Controlling the inflammatory response following TKA is a key element of any enhanced recovery protocol. In patients receiving chronic anticoagulation therapy, there are concerns with the concomitant use of non-steroidal anti-inflammatory (NSAIDs) due to the risk for bleeding. The purpose of this study is to evaluate the safety of NSAIDs in patients receiving chronic anticoagulation undergoing primary TKA.

**METHODS:** Using an administrative claims database, we reviewed the records of 102,812 patients undergoing primary TKA between 2017-2021. Within this group, 2299 patients were on chronic anticoagulation (i.e. coumadin, apixaban, rivaroxaban, etc.). The patients in this group were divided into those who filled a prescription for NSAIDs (i.e. celecoxib, meloxicam, etc.) within 30 days postoperatively following surgery (n=508) and those who were not prescribed these agents (n=1791). We compared revisions, manipulations, 30 and 90-day readmissions between the 2 groups.

## **RESULTS:**

There were no differences in terms of age, sex, obesity, and patient comorbidities between the 2 groups. Overall, manipulation within 180 days occurred in 125 patients (5.4%) (3.2% NSAID group vs. 6.1% controls, OR 0.48 CI 0.28-0.82, p<0.01). Revisions occurred in 27 patients (1.2%) (2% NSAID group vs. 1% controls, OR 2.34 CI 1.05-5.3, p=0.04). There were no differences in 30- or 90-day readmissions between the 2 groups (OR 1.25 CI 0.68-2.3, p=0.474 and OR 1.05 CI 0.62-1.78, p=0.863).

## **DISCUSSION AND CONCLUSION:**

The use of NSAIDs in patients on chronic anticoagulation therapy undergoing primary TKA was associated with a decreased risk for manipulation but a higher risk for early revision. While the overall risk of observed complications were low, judicious use NSAIDs in this patient population is advocated.